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AUTHOR Hill, Linda: Engelhard, George, Jr.
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ABSTRACT

A test of the effects of school organization, the school environment, and the larger community context on school attendance showed that environmental and contextual factors have the strongest impact. Using a model based on organizational theory, researchers hypothesized that, within the community context, environmental factors would affect school organization which would in turn affect school effectiveness (indicated by attendance). Environmental variables consisted of school size, expenditure per pupil, and overall student poverty level; organizational variables included pupil-teacher and pupil-paraprofessional ratios; and contextual variables comprised the school district's poverty level and the stability of its student population. Path analysis was used to correlate data from a sample of 93 public elementary schools in Chicago. The results indicated that school organization was strongly affected by school environment but had little direct influence on attendance once environmental factors were controlled for. Attendance can be most strongly correlated with the school's and the district's poverty levels and with the district's student stability. Future research should use better indicators of school organization (such as tracking) to test its relationship to attendance. (RW)

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SCHOOL ORGANIZATION

and

STUDENT ATTENDANCE

Linda Hill
University of Chicago

and

George Engelhard, Jr.
University of Chicago

EA 013 704

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Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, April, 1981.

ABSTRACT

The purpose of this study was to test a theory delineating the structural relationships of select organizational and environmental variables with school effectiveness. The theory represents an open systems organizational approach to the study of school effectiveness utilizing pupil attendance as an index of effectiveness.

The data analyzed were based on a random sample of 100 Chicago elementary schools. Environmental variables (school size and financial resources) were determinants of school organization (staff composition) and student attendance. School organization was related to student attendance. Contextual variables (community support and stability) dramatically influenced the relationship between school organization and student attendance.

SCHOOL ORGANIZATION AND STUDENT ATTENDANCE[1]

School attendance and other measures of quantity of schooling have received widespread attention from educational researchers in the last decade. Recent research in education points to the importance of time and quantity of schooling as important variables in explaining variations in educational achievement (Bloom, 1974; Wiley and Harnischfeger, 1974). Given the importance of time in the educational process, excessive absenteeism has become an increasing concern for many school systems.

Health officials have estimated an expected rate of pupil absence due to illness of approximately 4 to 5 percent a year (Bamber, 1979). According to the National Center for Educational Statistics, approximately 8 percent of the students enrolled in public schools in the United States are absent from school each day (Educational Research Service, Inc., 1977). The problem of student absence in urban areas is even more serious with reported absenteeism rates as high as 30 percent or more (Sewall, et al, 1979).

The purpose of this paper is to provide an approach to the study of student attendance based on a theoretical framework derived from organizational theory using the school rather than the individual as the level of analysis. In seeking explanations for student absenteeism,

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[1]This research was originally conducted by the first author as a part of a research practicum in sociology of education at the University of Chicago. The data was collected while both authors were employed as research consultants to the Chicago Board of Education.

previous researchers have traditionally focused on characteristics of the student, for example, attitudes, abilities, and socio-economic status. In contrast, little work has been done considering the contribution of school factors to attendance. The present study examines how a school intervenes between environmental inputs to the school and its outcomes and includes an exploration of how contextual variables affect this process.

Background

Many have challenged the view that school variables are unrelated to student performance. For instance Reynolds (1974) compared the average daily attendance rates for two academic years of nine secondary modern schools in an homogeneous, economically deprived working-class community. He noted marked and consistent differences among the attendance rates of these schools:

> These apparently similar schools have the same ability range from similar social backgrounds but have very different levels of absenteeism which cannot be accounted for by differing illness in the individual schools. Furthermore, even with national social changes, local population movement and seven intakes of pupils, the consistency is extremely high. Year after year it is the same schools which appear to be dealing well with truancy for girls as well as boys (Reynolds, 1974, 21).

From these findings, Reynolds maintains that there are a set of variables within the school's power to manipulate that influence attendance.

Although Reynolds has not identified what school factors are related to attendance, others have found that particular school variables covary with attendance, for example, school size, nature of instructional and curricular programs, and attendance policies and procedures. The Educational Research Service provides a comprehensive list of twenty in-school factors that have been used to explain student absenteeism:

In-School Factors

A. Staff
   1. Unsatisfactory relations between the school staff and the student and his/her parents
   2. Personality conflicts with teachers
   3. Ineffective teaching
   4. Lack of teacher training programs
   5. Inadequate or poor staff direction and supervision
   6. Unsound teacher/staff attitude toward attendance

B. Instruction
   1. Poor learning environment
   2. Inadequate program selection
   3. Poor educational preparation
   4. Lack of personal achievement and responsibility
   5. Perceived inequality of school reward structure
   6. No personal identification with school assignments
   7. Task and subject repetitiveness
   8. Little variety in class scheduling
   9. Arbitrary and inappropriate curricula and standards
   10. Fragmentation of instruction due to absences of regular teachers

C. Other
   1. Unclear school duties and responsibilities
   2. Ineffective grievance procedures
   3. Ineffective attendance monitoring system
   4. Inappropriate student transfer policies and procedures (ERS, 1977)

There has been no overarching framework to guide the work on school factors and attendance. Most of the studies concerning attendance have been of correlational character. Rarely is any sophisticated theoretical explanation offered for why the relationship under investigation should be expected. Hence, it is difficult to make any intergrative statement about the research findings in this area, except perhaps to remark that certain in-school factors do appear to be related to attendance. An appropriate model for such work might be an organizational effectiveness one utilizing an open-systems perspective.

This paper is intended to provide an alternative approach to the study of attendance based on a theoretical framework derived from organizational theory using the school rather than the individual as the level

of analysis. It is not a study of an individual's decision to attend school. The decision by an individual to attend school is a function of a complex set of interactions between the person's social environment, personality, and various school factors. Although an exploration of the variables leading to an individual's decision to attend is a significant and important research area, it represents only one of several possible approaches based on alternative levels of analysis. One alternative approach is based on the school level analysis which is explored in this paper.

Organizational Theory

Organizational theorists have been primarily concerned with business and government organizations, and rarely with school systems. At the same time educational theorists, who typically have their primary training in psychology are not familar with organizational theory as it has developed within the field of sociology. This has resulted in relatively few studies of school systems conducted from an organizational perspective by either group.

Organizational theorists are becoming increasingly concerned with the question of what makes an organization effective. (See Goodman, Pennings and Associates, 1977 for a compendium of recent research and perspectives.) Educational theorists are also becoming concerned with the identification and analysis of effective schools (Frederiksen and Edmunds, undated). Since the definition of the characteristics of an effective organization is a central theme in organizational theory, and since similar questions are being raised by educational theorists, the logical next step is to attempt a unification of these theoretical

perspectives through the application of organizational theory in order to address the questions raised by educational theorists.[2]

There are two important issues that must be dealt with in order to realize the advantages of this unification. The first one involves the problem of developing a meaningful and useful conceptualization of school systems as organizations. The second issue involves the question of what is meant by 'effectiveness'. It will be seen in the next section that the definition of 'effectiveness' is derived from our conceptual model of the school as an organization.

A Model for Determining Organizational Effectiveness

Following Parson's definition, organizations will be considered purposive systems. From this perspective, primacy of orientation to the attainment of a specific goal is used as the defining characteristic of an organization which distinguishes it from other social systems (Parsons, 1956). The specific goals of the system determine the processes or technology utilized by the organization for transforming environmental inputs into outcomes (goals). Although the goals of the system analytically determine the process or technology of the organization, a conceptual model for determining the effectiveness of an organization must take into account the situation or environment in which the organization exists and draws its resources. A conceptual model for examining organizational effectiveness is given below.

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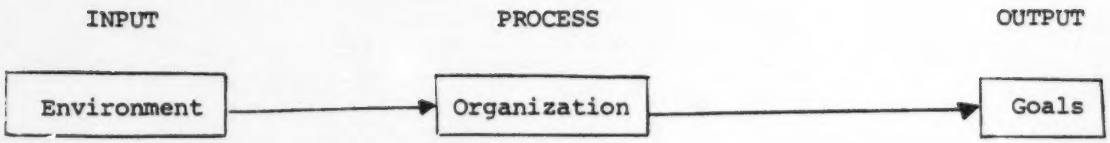
[2] Bidwell and Abernathy (1978) have written a monograph that provides an excellent introduction to organizational theory for the educational theorist who wants a fuller introduction to the organizational literature.



The general idea is that the environment in which the organization exists will affect the processing of the organization that transforms the environmental inputs into output or goals. The actual process or technology used by the organization is reflected in its organizational structure. The organization processes the environmental inputs in order to achieve the goals of the system. One way then to define the effectiveness of an organization is in terms of how well it achieves its goals in light of its environmental context. The important position of environment in determining organizational process and structure implies an open system perspective and one which we have called a social-ecological approach. This perspective is very close to what Aldrich (1979) has termed a 'population-ecology model'.

Of course, the above model is a simplification of reality. A more complete model would consider the relationships of one organization to another. The goals or output of one organization become inputs to another system. In the case of school organization, the school system supplies trained and socialized individuals to the local business organizations and society in general.

It is clear that in order to develop a model for examining the effectiveness of a school organization specifically, we must specify the goals of the system, the nature and structure of key organizational processes, and lastly the relevant environmental factors of the school system. Effectiveness will then be defined in terms of how successful the school organization is in achieving its goals within its ecological context.

The School As An Effective Organization[3]

Education has traditionally been thought of as an instrument for socializing the young to adapt to social, economic and political arrangements (Dreeben, 1968). Hence, schools are client-serving organizations whose primary goal is to facilitate the acquisition of behavior, knowledge and attitudes essential to a child's adaptation to society.

In light of this argument, Bidwell and Kasarda (1975) like others interested in school effectiveness, rely upon student academic achievement as a measure of effectiveness. Academic achievement, however, is simply one of the professed goals of schools. Another important school goal is student attendance. It can be understood as a goal of at least three of the school's constituencies, the students, the administration and the society at large. For the student, attendance is an indicator of their satisfaction that the school is serving their needs. Degree of participation in the school process is thought to reflect student involvement and commitment to the educational process (Bamber, 1979; Boocock, 1978; Stallings, 1975). There is much evidence that when students find the schooling process threatening or consider it inadequate they simply withdraw from it. For the administration student attendance concerns the acquisition of fiscal support for the school; in most school districts the finances a school receives are determined primarily by average daily attendance. For society as a whole, chronic absenteeisam is a predictor of future dropout from school, illiteracy and criminal activity (Bamber, 1979; Sewall, 1979).

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[3]See Engelhard (1980) for a discussion of organizational effectiveness and school districts as educational organizations.

Conceptual Model, Hypotheses and Rationale

As pointed out earlier, the primary purpose of this paper is to examine whether the organizational attributes of elementary schools mediate or intervene between the environmental inputs into the school and one of its outcomes, namely, student attendance. The conceptual model is given in Figure 1.

The variables used in this paper and their operational definitions are as follows:

ENVIRONMENTAL CONDITIONS[4]

School size (SIZE) - Regular membership which includes all pupils enrolled in a school.

Financial resoures (RESOURCE) - Total expenditures per pupil or the average amount expended for educating a given pupil projected over a school year.

School Poverty Index (POVSCH) - Percentage of familes within the school who receive Aid to Families with Dependant Children (AFDC) or General Assistance and poverty families who do not receive welfare as determined by ESEA eligibility list.

ORGANIZATIONAL VARIABLES

Pupil-teacher ratio (PUPIL) - Number of regular classes, excluding kindergarten, divided by the number of regular classroom teachers (with or without a classroom).

Pupil-paraprofessional ratio (PROF) - School membership on the last day of the period under study divided by the number of Board of Education funded paraprofessionals offering instructional services.

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[4]The operational definitions of the variables in the model are taken from different sources and will vary in reliability and validity causing an uncertain amount of measurement error. There is also the possibility of definitional dependencies among the ratio variables. These limitations should be kept in mind when considering the results which are reported.

DEPENDENT VARIABLE

Attendance rate (ATTEND) - Percentage based on the number of pupil attendance days divided by the total number of possible pupil attendance days.

CONTEXTUAL VARIABLES

Community Support (SUPPORT) - For the district in which a school is located, the percentage of families which receive Aid for Familes with Dependent Children or General Assistance and poverty families who do not receive welfare as determined by ESEA eligibility list.[5]

Community Stability (STABILITY) - For the district in which a school is located, the percentage based on the number of pupils who entered and pupils who left from September to June, divided by the membership at the end of September.[6]

The rationale for placing emphasis on staff composition variables as organizational attributes follows. The nature of educational technology is such that there is little substitute for the interaction of teacher and pupil (Bidwell, 1973). Bidwell portrays teaching as a social process that cannot occur except through interpersonal exchange. He indicates that the teacher-student relationship closely approximates the notion of a primary social relationship, utilizing a personal influence paradigm to explain teacher-student interactions. As Bidwell and Kasarda (1975) point out, in Thompson's terms, the educational technology is an intensive one (Thompson, 1967). Thus, the effectiveness of instruction is dependent upon the teacher's ability to attend to information about each pupil, to evaluate that information and to adjust his or her instructional methods accordingly. In order to be responsive to a pupil's needs the teacher

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[5]The larger the poverty level in the district, the smaller the community support. The rationale for this is discussed in the next section.

[6]The larger the mobility in the district, the smaller the stability.

must be accessible and involved in a personal and cooperative relationship with the pupil. Presumably variation in the organization of schools, in this case pupil/teacher ratio and pupil/paraprofessional ratio, will affect what transpires in this educative process. The specific hypotheses and their rationales are given below:

I. Size will have a direct and positive relationship to pupil/teacher ratio. In the short run, the financial resources of a school are relatively fixed. Therefore, the probable response to rising enrollment is the rationing of teachers or the allocation of less per pupil teacher time (Bidwell and Kasarda, 1977). This tendency will be reflected in the pupil/teacher ratio which is an indicator of the availability of teachers in relation to the number of pupils to be taught.

II. Financial resources will have a direct and negative relationship to pupil/teacher ratio. Schools with more resources will have more available funds for hiring teachers. Given that the educational technology is a labor intensive one, schools will probably utilize available money to hire more teachers and thereby decrease teacher rationing.

III. Financial resources will have a direct and negative relationship to pupil/paraprofessional ratio. Schools with more resources will have more available funds for hiring paraprofessional support staff to assist with instructional activities. Historically, times of severe budget cuts often led to the elimination of support personnel, for their positions come to be viewed as rather expendable ones (Sewall, et al., 1979).

IV. Pupil/teacher ratio will have a direct and negative relationship to percent student attendance. Given the nature of the educative technology as delineated earlier, the larger the number of students the teacher must attend and adapt to, the more difficult his or her task to meet the needs of the students and to enlist their involvement and commitment to the educational enterprise. Furthermore, in a smaller class, when a student is absent he or she is more likely to be missed. Consequently, some follow-up to the absence on the part of the teacher is more likely. Attendance procedures that include follow-ups to absences have been shown to increase student attendance (Bamber, 1979; ERS, 1977). Indeed, researchers have found pupil/teacher ratio to be negatively related to student attendance (Bamber, 1979; ERS, 1977; Stallings, 1975). These studies have also shown that pupil/teacher ratio is a rather crude indicator of the nature of the interaction of teachers and students. In an evaluation of the Follow Through program, it was found that the provision of individualized attention, in particular one child with a teacher or aide in personalized reading insturction, was an important factor in student attendance. To the extent that a teacher or adult aid was occupied with activities that did not include the students there were higher rates of absences:

> Two variables which recorded the number of adults in the classroom showed a positive correlation with number of days absent, which may indicate that a higher adult-student ratio is only one aspect to be considered when evaluating the effectiveness of classroom personnel. What the adult is doing may be more important than sheer number of adults. Adults who were less involved with the children or who worked only with large groups were likely to have a higher absence rate in their classrooms than adults who interacted with children on a one-to-one basis.(Stallings, 1975, 63)

V. Pupil/paraprofessional ratio will have a direct and negative relationship to percent student attendance. To the extent that support staff are available to assist in the provision of student services, more per pupil teacher time becomes available. Therefore, the teacher's ability to adapt to the specific characteristics and performances of each child should increase. Besides the services provided by paraprofessionals directly to the students should facilitate the meeting of student needs.

VI. The relationship between the staff composition variables and percent student attendance will be weaker in schools located in low support low stability communities than in schools located in high support low stability communities. Consistently, it has been demonstrated that school community affects the learning environment of a school (Gigliotti and Brookover, 1975). Parental support, interest and involvement are related positively to student performance. Furthermore, the stability level of the community has been shown to influence pupil outcomes (Gigliotti and Brookover, 1975). Residential stability level affects academic variables such as reading scores, I.Q. and sense of control. Gigliotti and Brookover argue that a positive learning environment is faciliated by a "reasonable degree of communication, cooperation and consensus about the learning enterprise" (Gigliotti and Brookover, 1975, p. 249). Presumably, such communication, cooperation and consensus should increase as interaction increases between the various constituencies of the school. Hence, the more mobile are the community residents of a school the more difficult it is to establish such an enhancing relationship between the school and its community.

Gigliotti and Brookover continue by speculating, however, that the effects of mobility can be modified. Specifically, mobility in a middle SES community should not influence the learning process to the same extent as the same level of mobility in the low SES community; middle class families should "carry with them" a built-in support for the schools which is not dependent on stability (Gigliotti and Brookover, 1975, p. 249). The middle SES community as compared to the low SES community holds an orientation to the schooling process similar to that of the school. In middle SES families there is greater emphasis on school related attitudes and skills than in low SES families. Middle SES families impart many of the values, beliefs and norms to their children which school requires. Therefore, they do not have to be communicated and agreed upon as they would in a low SES community.

Methodology

The data analyzed in this study were taken from the central archives of the Chicago Board of Education for the academic year, 1978-1979. A random sample of 100 elementary schools was chosen from the population of about 450 elementary schools in the Chicago school system. Seven of the schools were removed from the sample; four of the schools were excluded because of their organizational structure, for instance, schools for grades 3-6 and three were eliminated because of missing data. Of the 93 schools remaining in sample, seventy-three were kg-8 schools, three were kg-7 schools and nineteen were kg-6 schools.

This study is a secondary analysis of available data and may be considered essentially an exploratory study. The results should be considered tentative, but nonetheless suggestive of a future research agenda for the study of school effectiveness and attendance.

The method of statistical analysis utilized is path analysis. (See Duncan, 1975, for an excellent description of this technique.) A series of regression equations were solved by the method of least squares utilizing the regression program in SPSS. The Simon-Blalock approach of path analysis was used to examine the model and to break down the zero-order correlations between the variables into direct and indirect effects.

Percent from low income families (POVSCH) was controlled for as a disturbance term when estimating the effects of the other independent variables on student attendance. This was done because socio-economic status has been reported to be correlated with student attendance. In this study, however, we are interested in discovering factors more within the school's power to manipulate in controlling attendance.

To complement the above analyzes, a second set of relationships were considered. It was posited that characteristics of the community in which a school was located could dramatically influence the educative environment of that school. Hence, community variables act as contextual variables which can modify the relationships among input-throughput-output variables such as those outlined in this study. Two community variables, community support and community stability, served as contextual variables.

First, the total sample was subdivided into two subgroups, schools located in low community support districts and schools located in high community support districts. Those schools falling above the median on the community support variable were defined as located in low community support districts and those schools falling below the median were defined as located in high community support districts. Within each of these subgroups another division was made, schools located in high stability communities or districts. Those schools falling below the median on the community stability variable were classified as schools located in high

stability communities while those falling above the median were classified as located in low stability communities.

The parameters of the model were estimated separately for schools in these subsamples, namely, high support-high stability, high support - low stability, low support-high stability, and finally low support-low stability.

Results

The correlation matrix, the means and standard deviations for all the variables are given in Table 1. An examination of the correlation matrix shows that the relationships between the environmental conditions and the organizational attributes are congruent with the hypothesized model. Size is positively related to pupil/teacher ratio (r = .21), while financial resources were negatively related to pupil/teacher ratio (r = -.21*) and were negatively related to pupil/paraprofessional ratio (r = -.57*). School attendance was significantly correlated with all the variables in the model, except pupil/teacher ratio and financial resources. The poverty index for each school (POVSCH) was the most highly correlated variable with school attendance as was expected (r = -.62*).

Table 2 gives the results of the regression of the organizational attributes on the environmental conditions, and Table 3 gives results of the regression of the organizational attributes on the environmental conditions, after controlling for the poverty level of the school. School size and financial resources did not have a significant impact on the pupil/teacher ratio, although the relationship was in the expected direction. Financial resources had a statistically significant impact on the pupil/paraprofessional ratio as hypothesized, and school size had a significant effect on the pupil/paraprofessional ratio, which had not

been hypothesized. After controlling for the poverty level of the school, the relationship between the environmental conditions in the model and the organizational attributes were not changed. If the multiple R is taken as a general indication of fit, then the model tends to predict the pupil/paraprofessional ratio better than the pupil/teacher ratio.

The hypothesized relationship between the two organizational variables and attendance was found to be negligible. Tables 4 and 5 give the results of the regression analysis for attendance and the organizational attributes. The correlation between the pupil/paraprofessional ratio and attendance was significant, but after controlling for pupil/teacher ratio and the poverty level of the school this relationship was not significant.

Table 6 gives the unstandardized and standardized partial regression coefficients for the relationships between the environmental variables and student attendance, controlling for the organizational variables and the poverty level of the school. Contrary to our expectations the environmental variable, financial resources, had a significant direct effect on student attendance, and the organizational variables did not have a significant effect on school attendance. According to the causal model proposed, these coefficients should have approached zero, if there were no measurement errors, and if the environmental conditions affected student attendance only through the organizational variables.

Next, a decomposition of the pertinent zero-order correlations into direct and indirect effects was performed. Given the earlier analyses, it was not surprising to discover that the proposed causal model was not entirely supported. Although some of the environmental variables were significantly related to the organizational variables, there appeared to be no indirect effects of the environmental variables on student attendance. Only the direct effects were substantial.

Finally, we examined the functioning of the causal model within different contextual settings. The four settings were: low community stability and low support, low community stability and high support, high community stability and low support, and finally high community stability and high support. The correlation matrices for these four contextual settings are given in Tables 7 and 8. In interpreting the results based on the contextual settings, it is important to keep in mind that the sample sizes are relatively small for this type of analysis (26,19,14, and 26), so that the significance tests are not very sensitive. As expected, the low stability-low support setting had the lowest attendance rate, the low stability-high support setting and the high stability-low support had similar attendance rates, while the high stability-high support setting had the highest attendance rates.

The results of the regression of school attendance on all the variables in the model by contextual setting are given in Table 9. The hypothesis that the relationship between the organizational attributes (staff composition) and student attendance will be weaker in schools located in the low support-low stability settings then the attendance in high support-low stability setting was not supported. In one of the contextual settings, namely high support-high stability, there was a significant effect of an organizational variable (pupil/teacher ratio) on school attendance. It is interesting to note that the poverty level of the school was important in every setting, except the high stability-high support context. Of course this result may be an artifact of the definition of the contextual settings based on district level poverty levels.

Discussion

The purpose of this paper was to provide an approach to the study of school attendance based on theoretical framework derived from organizational theory using the school rather than the individual as the level of analysis. Two environmental variables, school size and financial resources, were specifically built into the model and were hypothesized to have a direct effect on the two organizational variables, pupil/teacher ratio and pupil/paraprofessional ratio. Both environmental variables had a significant impact on pupil/paraprofessional ratio, but neither of the environmental variables had a significant impact on pupil/teacher ratio. The hypothesized relationships between the organizational variables and attendance were not statistically significant. Overall, the poverty level of the school had the largest impact on attendance, although financial resources also had a significant effect.

The results suggest that for urban elementary schools, environmental factors are important determinants of certain organizational variables, while the organizational variables after controlling for the environmental variables are not directly related to school effectiveness, as represented by school attendance. Since attendance can be viewed as a goal for at least three of the school's constituencies, we might conclude that the school is not realizing this goal. We feel that the conclusion that schools are entirely ineffective as evidenced by the lack of relationship between pupil/teacher ratio and pupil/paraprofessional ratio with attendance rates to be premature and possibly incorrect.

First, we must consider how well we have captured the educational process within the school organization by using pupil/teacher ratio and pupil/paraprofessional ratio. These indices are fairly rough indicators

of the educational technology. What is needed is more direct indicators of the educational process within the schools. Various factors, such as, tracking and other curricular variations may have a more direct effect on attendance. Another factor to consider is how well the attendance variable reflects the goals of the school.

We feel that the approach provided by organizational theory to the analysis of school effectiveness to be quite useful. The complexity of schools and schooling precludes finding any simple analytical framework for examining educational systems. What is needed in the future is analyses based on different levels of analysis using appropriate theoretical framework which can be combined to provide insight and understanding of schools and schooling.

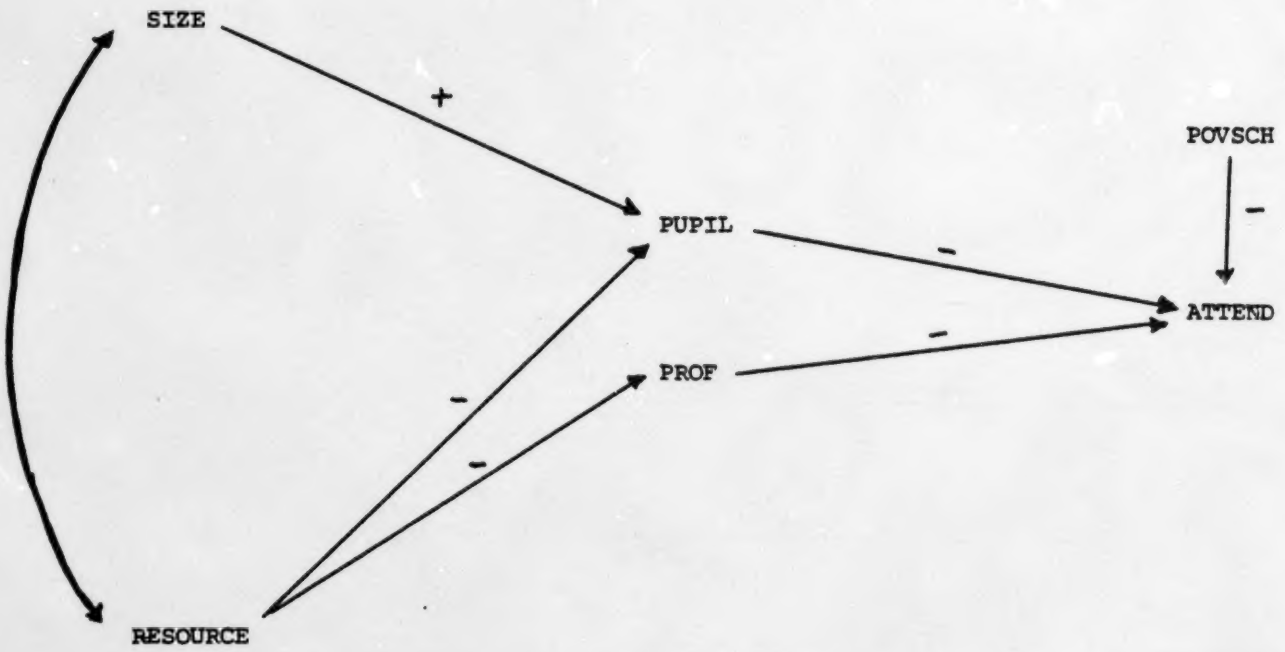
Table 1. Correlation matrix, means and standard deviations - total sample.

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
X_1 ATTEND	***	-.06	-.17*	-.25*	-.02	-.62*	.58*	.53*
X_2 PUPIL		***	.10	.21*	-.21*	.01	-.10	-.10
X_3 PROF			***	.50*	-.57*	.19*	-.18*	-.18*
X_4 SIZE				***	-.58*	.28*	-.25*	-.14
X_5 RESOURCE					***	-.12	.15	.01
X_6 POVSCH						***	-.38*	-.76*
X_7 STABILITY							***	-.50*
X_8 SUPPORT								***
Mean	91.87	29.60	347.33	615.02	1302.02	33.53	28.72	32.32
Standard Deviation	1.79	2.08	240.82	263.13	198.76	21.97	7.61	16.94

N = 93

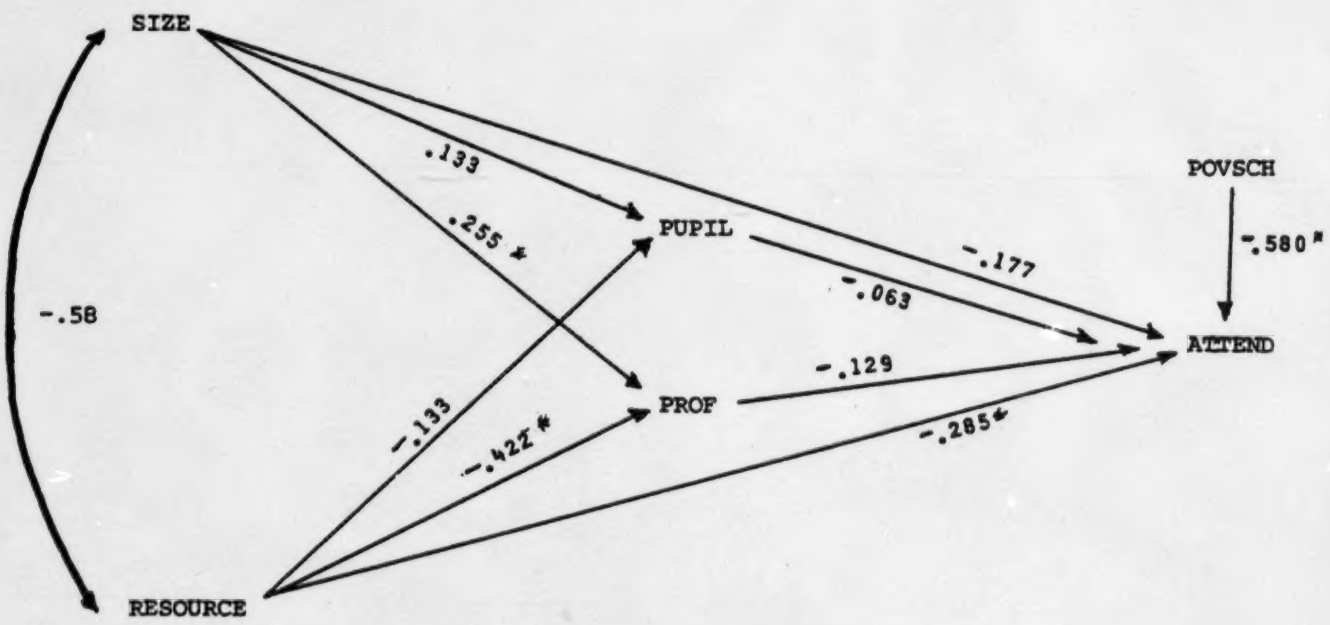
*p < .05

Figure 1. Conceptual model of elementary school organization and attendance.



Key - + indicates a hypothesized positive relationship and - indicates a hypothesized negative relationship, no path indicates no previous hypothesis.

Figure 2. Path coefficients for the total sample (N=93)



* Coefficient is more than twice its standard error

Table 2. Unstandardized partial regression coefficients from regression of each organizational attribute on environmental conditions (standard errors in parentheses).

Environmental condition	Organizational attribute	
	PUPIL	PROF
SIZE	.001(.001)	.234(.094)*
RESOURCE	-.001(.001)	-.511(.125)*
Constant	30.8	869.5
Multiple R	.236	.608

*coefficient is more than twice its standard error

Table 3. Unstandardized partial regression coefficients from regression of each organizational attribute on environmental conditions controlling for poverty index (POVSCH) (standard errors in parentheses).

Environmental condition	Organizational attribute	
	PUPIL	PROF
POVSCH	-.005(.010)	.742(.957)
SIZE	.001(.001)	.217(.097)*
RESOURCE	-.001(.001)	-.518(.124)*
Constant	30.8	864.2
Multiple R	.244	.615

*coefficient is more than twice its standard error

Table 4. Unstandardized partial regression coefficients from regression of of attendance (ATTEND) on organizational attributes (standard errors in parentheses).

Organizational attributes	Dependent variable
	ATTEND
PUPIL	-.037(.090)
PROF	-.001(.001)
Constant	93.40
Multiple R	.175

* coefficient is more than twice its standard error

Table 5. Unstandardized partial regression coefficients from regression of attendance (ATTEND) on organizational attributes controlling for poverty index (POVSCH) (standard errors in parentheses).

Independent variables	Dependent variable
	ATTEND
POVSCH	-.050(.007)*
PUPIL	-.040(.072)
PROF	-.000(.001)
Constant	94.91
Multiple R	.624

*coefficient is more than twice its standard error

Table 6. Unstandardized and standardized partial regression coefficients from regression of school attendance rates on all independent variables in the model (standard errors in parentheses).

Independent variables	ATTEND (UNSTANDARDIZED)	ATTEND+ (STANDARDIZED)
POVSCH	-.047(.007)*	-.580*
PUPIL	-.054(.071)	-.063
PROF	-.000(.001)	-.129
SIZE	-.001(.001)	-.177
RESOURCE	-.003(.001)*	-.285*
Constant	99.3	
Multiple R	.661	
N = 93		

+ Standardized partial regression coefficients are the coefficients used in the path analysis in Figure 2.

* Coefficient is more than twice its standard error

Table 7. Correlation matrix, means and standard deviations - Low community stability with Low community support below the diagonal and High community support above the diagonal.

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
X_1 ATTEND	***	.31	-.00	-.00	-.22	-.50*	.29	.27
X_2 PUPIL	-.24	***	-.05	.17	-.36	-.22	-.00	.18
X_3 PROF	-.19	.22	***	.51*	-.51*	.21	.17	-.19
X_4 SIZE	-.34*	.21	.36*	***	-.59*	.41	.11	-.00
X_5 RESOURCE	.15	-.10	-.53*	-.54*	***	-.26	.05	-.30
X_6 POVSCH	-.52*	.12	.07	.18	-.01	***	-.34*	-.28
X_7 STABILITY	.33*	-.38*	-.16	-.12	.38*	.11	***	-.39*
X_8 SUPPORT	.41*	-.09	-.26	-.15	.02	-.55*	.01	***
Low community stability and low community support (N = 26)								
Mean	91.00	29.79	341.50	648.23	1313.15	47.90	35.13	48.04
S.D.	1.50	2.14	264.69	194.72	207.63	16.68	4.50	8.69
Low community stability and high community support (N = 19)								
Mean	91.24	29.18	411.93	646.68	1291.37	25.75	34.67	23.91
S.D.	1.60	2.18	288.14	234.97	208.99	18.61	5.08	8.93

* $p < .05$

Table 8. Correlation matrix, means and standard deviations - High community stability with low community support below the diagonal and high community support above the diagonal.

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
X_1 ATTEND	***	-.51*	-.42*	-.65*	.31	-.36*	.62*	.13
X_2 PUPIL	.12	***	.27	.32	-.32	-.11	-.20	.14
X_3 PROF	.30	-.13	***	.61*	-.60*	.21	.12	-.78*
X_4 SIZE	.22	.09	.51*	***	-.64*	.63*	-.45*	-.07
X_5 RESOURCE	-.78*	.12	-.64*	-.55*	***	-.31	-.13	-.45*
X_6 POVSCH	-.69*	-.08	.07	.11	.30	***	-.13	-.45*
X_7 STABILITY	.79*	-.12	.81*	-.21	-.60*	-.57*	***	-.27
X_8 SUPPORT	.70*	-.12	.23	-.66*	-.66*	-.64*	-.59*	***
High community stability and low community support (N = 14)								
Mean	91.38	29.86	423.68	582.57	1245.36	52.05	24.79	46.56
S.D.	2.00	2.65	231.15	182.75	201.80	19.62	1.87	10.78
High community stability and high community support (N = 26)								
Mean	93.30	29.37	260.67	524.19	1348.00	14.09	19.77	13.61
S.D.	1.37	1.39	173.01	300.34	188.83	12.81	3.21	8.18

*$p < .05$

Table 9. Unstandardized partial regression coefficients from regression of school attendance rates on all independent variables for contextual variables (standard errors in parentheses).

Independent variables	Low community stability		High community stability	
	Low support	High support	Low support	High support
POVSCH	-.041(.016)*	-.045(.022)*	-.041(.014)*	-.011(.023)
PUPIL	-.088(.132)	.090(.192)	.143(.095)	-.391(.169)*
PROF	-.000(.001)	-.000(.002)	-.001(.002)	-.000(.002)
SIZE	-.002(.002)	.000(.002)	-.001(.002)	-.002(.001)*
RESOURCE	-.000(.002)	-.001(.002)	-.008(.002)*	-.002(.002)
Constant	97.1	89.1	100.9	109.3
Multiple R	.591	.576	.941	.755
N	26	19	14	26

* coefficient is more than twice its standard error.

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